

Amendments to the Claims

This Listing of Claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (currently amended).

An apparatus for the emission of a combined flux of electrons and electromagnetic radiations particularly suitable for the treatment of the atheromatous disease comprising:

- a. two electric circuits (2, 2') with opposed polarity, a circuit with positive polarity (+) and the other one with negative polarity (-) fed by the same alternate current distribution network (10), each circuit comprising an electric or electronic device (7, 7') transforming the alternate current of said distribution network (10) into direct current and supplies a direct current with a voltage comprised between 4,000 and 80,000 V and an intensity comprised between 0.05 and 0.5 mA;
- b. two outputs (8, 8') one of which (8) is connected to the circuit with positive polarity (+) and the other one (8') to the one with negative polarity (-), and
- c. two plate terminal wires (9, 9'), each of them (9, 9') being provided with at least one bundle of pointed wire elements (11, 11'), a wire (9) being connected to the output of said circuit with positive polarity (+) and the other wire (9') being connected to the output of said circuit with negative polarity (-),

~~characterized in that~~ wherein said apparatus is provided with means suitable for the identification of the coronary vessel corresponding to the stenosis or lesion to be treated and with control and drive

means of said plate terminal wires so that the combined flux of electrons and electromagnetic radiations emitted is directed in a concentric and accurately targeted way towards said coronary vessel.

Claim 2 (currently amended).

The apparatus according to claim 1, ~~characterized in that~~ wherein the means suitable for the identification of the coronary vessel to be treated are constituted by a thoracic support (30) wherein a mapping of the coronary tree obtained by a chest X-ray and a coronarography examination is configured and, by measure the vessels to be treated and the x-axis and y-axis coordinates to set the goniometric measurements.

Claim 3 (currently amended).

The apparatus according to claim 1 ~~or 2, characterized in that~~ wherein the command and drive means of the plate terminal wires are light means (40) mounted on said plate terminal wires which are oriented in such a way to light the area to be treated and have a visual control of the area involved with the treatment.

Claim 4 (currently amended).

The apparatus according to claim 1 ~~or 2, characterized in that~~ wherein the control and drive means of the plate terminal wires are LEDS or nano-emitters, at least three in number, which are positioned around the area to be treated and, if required, they are detected from special cameras positioned on the two plate terminal wires.

Claim 5 (currently amended).

The apparatus according to ~~any of the previous claims~~ claim 1, ~~characterized in that it~~ which comprises a programmable timer (14), placed on at least one of the two electric circuits for the emission of an intermittent flux or at adjustable intervals.

Claim 6 (currently amended).

The apparatus according to ~~one of the previous claims~~ claim 1, ~~characterized in that~~ wherein the surface of the cross section of each bundle of pointed wire elements (11, 11') is comprised between 0.1 and 100 mm².

Claim 7 (currently amended).

The apparatus according to claim 6, ~~characterized in that~~ wherein the surface of the cross section of each bundle of pointed elements (11, 11') is comprised between 1 and 10 mm².

Claim 8 (currently amended).

The apparatus according to ~~any of the previous claims~~ claim 1, ~~characterized in that~~ wherein each bundle (11, 11') is constituted by a number of wire elements comprised between 100 and 10,000.

Claim 9 (currently amended).

The apparatus according to ~~any of the previous claims~~ claim 1, ~~characterized in that~~ wherein each bundle (11, 11') is divided into many groups of pointed wire elements and the groups forming a bundle can be up to 100 in number.

Claim 10 (currently amended).

The apparatus according to ~~any of the previous claims~~ claim 1, ~~characterized in that~~ wherein the pointed wire elements are carbon fibres.

Claims 11 - 12 (cancelled).

Claim 13 (new)

The apparatus according to claim 1 for use in the treatment and/or prevention of the atheromatous disease, wherein the stenosis is not higher than 75%, consisting in orienting the two bundles of pointed wire elements (11, 11") in a targeted and concentrated way towards the part of the body insulated from ground, corresponding to the stenosis or lesion to be treated, and delivering between said bundles (11, 11") a direct current having a voltage comprised between 4,000 and 80,000 V and an intensity comprised between 0.05 and 0.5 mA.

Claim 14 (new).

The apparatus according to claim 13, wherein the delivery of the direct current is intermittent.